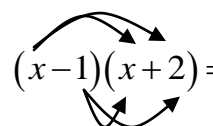
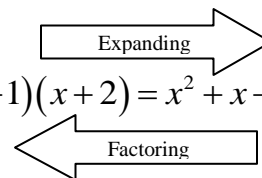


Lesson 3.2: Greatest Common Factor - GCF

Expanding (Bunny Hops or FOIL) means take a product (multiplying) of two numbers and turn it into the addition of several numbers.

$$\text{Ex - } (x-1)(x+2) = x^2 + x - 2$$


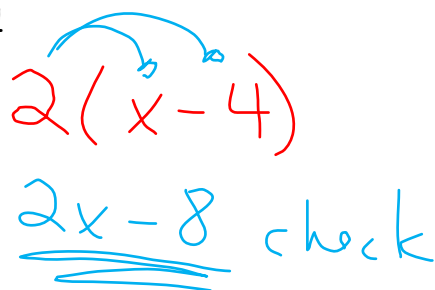
$$(x-1)(x+2) = x^2 + x - 2$$


Factoring is the opposite. We take the sum of several numbers and turn it into the product of two numbers.

Greatest Common Factor → Take out the BIGGEST factor that is common to every single term.

Example 1

$$2x - 8 = 2(x - 4)$$

$$= \underline{\underline{2x - 8}} \text{ check}$$


Example 2

$$3x^2 + 7x =$$

$$\frac{3xx}{x} + \frac{7x}{x} = x(3x + 7)$$

Example 3

$$-3x^2 + 12x$$

$$= 3(x^2 - 3x + 4) = -3x(x - 4) \rightarrow \text{check!}$$

Example 4

$$3x^2 - 9x + 12$$

$$-3x^2 + 12x$$